

## Glossary

**Abbreviation** - Any shortened form or abridgment of a word, expression, or phrase used to conserve space or time including initializations, contractions and acronyms.

**Abduction** - Movement away from the midline of the body.

**Accelerators** - Keyboard commands that can be used instead of pointing and clicking on menu options. They are indicated by underlining the proper character and placing the keyboard alternative in parenthesis after the option (e.g., Bold (Ctrl+B)).

**Accreditation** - The authorization and approval granted to an AIS or network to process sensitive data in an operational environment.

**Acronym** - A word formed from the initial letter or letters of a group of words.

**Action level** - An 8-hour time-weighted-average noise level of 85 dBA or, equivalently, a noise dose of 50 percent, at which affected users will be provided hearing protection and placed in an audiometric testing program.

**Action statement** - An action verb followed by the object or item acted upon.

**Active Help** - A form of “Help” that senses an inappropriate entry and interrupts the task to ask users what they are attempting and if they are sure they want to complete the operation they have just initiated. Depending upon the user’s response to the question, active “Help” then suggests the correct action.

**Adaptive automation** - Is the real time allocation of tasks to the user or automated system in a flexible manner, changing the automation to meet current situational demands. Adaptive automation may benefit user performance by allowing the user to remain in active control of the system instead of becoming a passive observer.

**Adduction** - Movement toward the midline.

**Advance organizer** - Supplementary information that is presented prior to the main body of information in which a user is interested.

**Advice** - An interactive, context-sensitive “Help” source that indicates what entry to make at the current location in the application, the required keystroke(s), or which steps to take to complete the task.

**Advisory** - A signal that indicates a safe or normal configuration, condition of performance, or operation of essential equipment, or attracts attention and imparts information for routine action purposes.

**Alarm filtering** - A technique by which unnecessary alarms are eliminated.

**Alarm suppression** - Alarm messages are not displayed but are available to the user upon request.

**Alert** - A signal that indicates a condition relating to the effective performance of duties. The condition or message requires the operator or maintainer to take immediate action or indicate that a significant update in information necessary for the effective performance of duties is available.

**Alert boxes** - Applied to display messages to users to inform them of situations that may require their attention or are possibly dangerous.

**Alphanumeric keys** - The letters of the alphabet, numerals, and punctuation symbols (numeric keypads may be separate on portable computers).

**Anthropometry** - The scientific measurement and collection of data about human physical characteristics and the application (engineering anthropometry) of these data in the design and evaluation of systems, equipment, manufactured products, human-made environments, and facilities. Biomechanics describes the mechanical characteristics of biological systems, in this case the human body, in terms of physical measures and mechanical models. This field is interdisciplinary (mainly anthropometry, mechanics, physiology, and engineering). Its applications address mechanical structure, strength, and mobility of humans for engineering purposes.

**Appendix** - A body of supplementary information collected, labeled, and placed at the end of a document.

**Attributes** - Instructions that change the characteristics of a selected item. An example of an attribute is changing text from standard to bold type.

**Authentication** - The act of identifying and confirming the eligibility of a station, originator, or user to access specific categories of information. Authentication is a measure designed to provide protection against fraudulent entry or transmissions by establishing the validity of a transmission, message, station, or originator.

**Authorization** - Granting to a user or user group, the right of access to a program, a process, or information.

**Automatic test equipment** - Checks two or more signals in sequence without the intervention of a maintainer. The test usually stops when the first out-of-tolerance signal is detected.

**Automation** - A device or system that independently carries out a task that was formerly carried out by a human.

**Automation bias** - When users rely on automated decision aids in a heuristic manner.

**Biomechanics** - Describes the mechanical characteristics of biological systems, in this case the human body, in terms of physical measures and mechanical models.

**Brightness** - An attribute of visual sensation that is determined by the intensity of light radiation reaching the eye.

**Browse back** - The action of moving to the previous window without permanently resetting system variables; however, system variables in the temporary state table will be reset.

**Browse exit** - The action of leaving browse mode.

**Browse next** - The action of moving to the succeeding window without permanently setting system variables; however, system variables will be set to a temporary state table.

**Built-in test equipment** - An integral part of a unit of equipment, can range from a simple voltmeter to a complex automatic checker.

**Cable** - A number of lines bound together within a single, permanent sheath.

**Cascading menu** - A type of hierarchical menu in which a submenu is attached to the right side of a menu item. Cascading menus can be added to drop-down menus, pop-up menus, or even other cascading menus.

**Case** - The part of a unit of equipment that encloses and protects the equipment from its surroundings. It may also serve to protect the surroundings - including maintainers - from the equipment.

**Cathode Ray Tube (CRT)** - A vacuum tube of a television or computer monitor in which the inner surface is coated with phosphors which glow and produce light when hit by an electron beam. CRT is often used as a generic term for a computer monitor.

**Caution** - A signal that indicates the existence of a condition requiring attention but not immediate action or a written notice given when a situation might result in damage to, or destruction of, equipment or systems.

**Center-justified text** - Lines are centered on the page, with both right and left margins ragged.

**Central visual field** - Central visual field (sometimes referred to as the focal area) is the central 30° of the visual field. This is the area that people use to look at objects in the world, moving their eyes as needed to bring images of the object onto the fovea, which is the area of highest acuity. When an object is outside of the focal area, a person will usually turn their head rather than simply move their eyes.

**Certification** - The technical evaluation that supports the accreditation process and establishes the extent to which a particular computer system or network design and implementation meets a pre-specified set of security requirements.

**Circumduction** - A continuous circular movement of a limb.

**Client area (or working area)** - The main area of the window that users employ to do their operational or application tasks. It is the area where users make their inputs and receive their outputs.

**Collating test equipment** - Presents the results of two or more checks as a single display; for example, a light might come on only if a number of different signals are in tolerance.

**Color fringes** - Are the pixels along the border of an object that contain a combination of the selection and background colors.

**Combo box** - A special type of text box with an attached list of options. Combo boxes allow the user to either select from the given list or type in an alternative response. There are two types of combo boxes, standard and drop-down.

**Comfort zone** - That range of environmental conditions in which humans can achieve thermal comfort. It is affected by work rate, clothing, and state of acclimatization.

**Command entries** - A type of control entry that enables the user to initiate a message to the system that will specify desired functions.

**Command language** - A limited programming language used strictly for executing a series of commands (e.g., Linux, any DOS shells).

**Commands** - Instructions that cause a device to perform some action.

**Component** - A subdivision of a unit of equipment that can be treated as an object by the maintainer, but which can be further broken down into parts. A mounting board together with its mounted parts is an example of a component.

**Connector** - A piece of hardware that joins or attaches lines or cables to other lines or cables or to units of equipment. The term is used rather loosely to refer to either of the two parts that mate with each other and to the plug that mates with a receptacle.

**Consistency** - Consistent means adhering to the same principles with minimal variation.

**Contrast** - The range between the lightest tones and the darkest tones. The lower the number value, the more closely the shades will resemble each other. The higher the number, the more the shades will stand out from each other.

**Contrast ratio** - The luminance of the foreground divided by the luminance of the background. It indicates how much brighter a pure white output would be than a pure black output. The greater the contrast, the sharper the image will be. It is also called luminance ratio.

**Control automation** - When an automated system executes actions or control tasks with some level of autonomy.

**Control entries** - User input for sequence control, such as function key activation, menu selection, and command entry.

**Copy** - Instructs the computer to copy selected data.

**Correlation coefficient or "r" value** - Describes the degree to which two variables vary together (positive correlation) or vary inversely (negative correlation). The correlation coefficient, "r", has a range of values from +1.0 (perfect positive correlation) through -1.0 (perfect negative correlation). Multiple correlation involves the predictable relationship of two or more variables with another criterion variable (such as a composite measurement value).

**Corridors** - Walkways that are physically restricted by walls or the like.

**Cover** - A part of a unit of equipment that closes an access opening.

**Critical function** - Is a function that can cause system failure when a malfunction is not attended to immediately.

**CRT** - See Cathode Ray Tube.

**Cursor** - A marker on the display screen that indicates the position where the computer expects the next input or will display the next output. The cursor may be positioned by the computer or by the user.

**Dark adaptation** - The process by which the eyes become more sensitive in dim light. The eyes adapt almost completely in about 30 minutes, but the time required for dark adaptation depends on the color, duration of exposure and intensity of the previous light.

**Database** - A set of interrelated data stored in a computer.

**Data-entry window** - A window that contains a set of labeled fields for entering, changing, and deleting data. It may also contain labeled data display fields, which a user cannot change.

**Decision aids** - (sometimes referred to as decision support systems) Automated systems that provide support to human decision-making processes, either unsolicited or by user request. Decision aids can narrow the decision alternatives to a few or suggest a preferred decision based on available data.

**Dedicated formatting keys** - Keys for text formatting operations such as a **Space** bar, a **Tab** key, and a **Return** or **Enter** key.

**Depression** - The lowering of a body member from its normal position.

**Design limits approach** - A method of applying population or sample statistics and data about human physical characteristics to a design so that a desired portion of the user population is accommodated by the design. The range of users accommodated is a function of limits used in setting the population portion.

**Diffuse glare** - A type of glare caused by the general ambient luminance, which effectively reduces the display contrast without producing significant specular reflection.

**Direct manipulation** - When the user controls the interaction with the computer by acting directly on objects on the display screen. An object may be an icon, menu option, symbol, button, or dialog box. An example of direct manipulation is a GUI.

**Disability** - A physical or mental impairment that substantially limits one or more of a person's major life activities.

**Disparity** - The computation of depth values based on the lateral distance between corresponding picture elements in both image planes of stereo vision.

**Displacement joystick** - A joystick that moves in the direction it is pushed. Displacement joysticks are usually spring-loaded so that they return to their center position.

**Display sequencing** - A means of reducing clutter by displaying a series of partial displays (e.g., a map and a series of overlays) or of displaying data sequentially. It can also be used as a form of animation.

**Dose** - The accumulated exposure to noise.

**Drop-down combo box** - A combo box that has a down arrow button, and a drop-down list.

**Dwell emphasis** - When the pointer comes to rest for a predetermined time on a selected object, the computer tells the user which object it perceives the user is about to select.

**Dynamic strength** - A force exerted by limbs moving in a smooth manner over time, such as while lifting an object.

**Dynamically-generated fault isolation recommendation** - A recommendation made by a computer system based on stored information and information received from user inputs, automated system inputs, or both. The information used by the system may include historical information, heuristics, probability factors, and cost factors. The recommendation may be derived using model-based reasoning, dependency models, fault-based reasoning, rule-based logic, information theory, or advanced artificial intelligence schema.

**Effective temperature** - An empirical thermal index that illustrates how combinations of dry bulb air temperature, wet bulb temperature, velocity of air, and clothing affect people.

**Effective watt** - Equal to 1.84 watts.

**Effectively** - Carrying out a task effectively means producing the desired result.

**Efficiently** - Carrying out a task efficiently means that the desired result is produced with a minimum of waste (usually in relation to time).

**ELD** - See electroluminescent displays.

**Electroluminescent displays (ELD)** - A flat-panel display, the type typically used for laptop computers, that works by placing a thin phosphorescent film between one plate coated with vertical wires and another plate with horizontal wires, to form a grid. When an electrical current passes through a horizontal and a vertical wire, the phosphorescent film at this intersection glows, creating a point of light (pixel).

**Elevation** - The raising of a body member from a normal position.

**Ellipses** - Visual indicators, such as three dots (...), used to distinguish menu options that branch to other sub-menus, from menu options that will immediately perform an operation.

**Exclusive buttons** (option buttons or radio buttons) - Single, two-state choices, which are mutually exclusive from each other.

**Explosive strength** - The application of peak amounts of strength for short periods of time, usually periodically, such as in running or sprinting.

**Extension** - The straightening of a limb or an increase in the angle between parts of the body.

**Fasteners** - Devices that join, attach, and mount parts, components, cases, covers, and units of equipment. They include quick fastening and releasing devices, screws, bolts, latches, catches, rivets, retainer rings, and retainer chains.

**Figure** - An exhibit that is primarily graphical or pictorial in nature, as opposed to verbal or numerical.

**Fixed-function key** - Keys provided for extra or general functions, typically labeled **F1**, **F2**, and so on.

**Flexion** - The process of bending a limb or decreasing the angle between parts of the body.

**Flicker** - The appearance of flashing that occurs in a computer display when the display is not refreshed frequently enough causing the phosphor to begin to decay prior to being refreshed.

**Focal vision** - The central 30° of the visual field. It is the area that people use to look at objects in the world, moving their eyes as needed to bring images of the object on to the fovea, which is the area of highest acuity.

**Foot lamberts** - Is a measure that has been corrected for the visual system's differential sensitivity to different wavelengths, giving an approximation to perceived brightness.

**Fovea** - The small central region of the retina that exhibits the greatest sensitivity to detail and color.

**Fully-justified text** - Spacing is added within and between words so that all lines are the same length, resulting in alignment of both right and left margins.

**Function keys** - Labeled keys that serve as keyboard short cuts (e.g., F1, F2, F3, or with the function name such as Delete or Insert) by combining in one key the actions of a sequence of individual keys.

**Gas plasma display** - Is a type of flat-panel display that works by placing neon gas between one plate coated with vertical conductive print and another plate coated with horizontal conductive print to form a grid. A point of light (pixel) is created at the intersection of a horizontal and vertical line that has been charged with an electric current.

**Glare** - Is produced by any luminance within the visual field that is sufficiently greater than the luminance to which the eye is adjusted. Glare causes eye fatigue, discomfort, and annoyance, as well as interfering with visual performance and visibility.

**Go, no-go test equipment** - Provides one of two alternative answers to any question. For example, it tells whether a given signal is in or out of tolerance.

**Graphic menus (palettes)** - A set of unlabeled symbols, typically presented within small rectangles. Symbols may be icons, patterns, characters, or drawings that represent an operation. Palettes are used widely in drawing and painting packages but are commonly found in word-processing applications as well.

**Grid lines** - Horizontal lines, vertical lines, or both, extending from the scale divisions of one or both axes of a graph and intended to aid users in locating and reading data points.

**Group** - On a pull-down menu, a group is any set of menu items between two separators or the whole list if there are no separators on the pull-down menu.

**Guard** - An enclosure or barrier intended to prevent inadvertent or unauthorized operation of a control.

**Hard function key** - The physical function key on the keyboard.

**Hazardous condition** - The presence of energy or a substance which is likely to cause death or injury by reason of physical force, shock, radiation, explosion, flames, poison, corrosion, oxidation, irritation, or other debilitation. Biological and chemical hazards can have debilitating effects through disease or interference with physiological functions.

**Hazardous location** - A space within a facility, room, or open environment where a hazardous condition exists or is accessible or exposed within the system or equipment located within the space.

**Heading** - The title of an organizational subdivision of a document, that is, a title that has hierarchical significance.

**Hierarchical menu** - A large series of options or menus that is organized as a multi-level, branching structure in which an option in a higher-level menu is the name of another menu at the next lower level. The options in the lowest level menus are not the names of other menus. They are commands or selectable values, such as color squares on a palette or specific Auto Text choices (e.g., Dear Sir, or To Whom It May Concern).

**Hot spot** - The selectable area in which a user can place the pointer and successfully select an icon.

**Human physical and associated measurement characteristics** - Refers to specific physical, mobility, or strength features of human users and to the explicit way that a human feature or capability is measured for use as general anthropometric or biomechanics data or as data for a specific design.

**Identification** - The process that enables the security safeguards to recognize a user name (usually through a machine-readable name) as an identical match to a name previously listed in an authorized user file.

**Illumination** - The amount of light (luminance flux) falling on a surface. Measured in lumen/m<sup>2</sup> = lux = 0.093 ft-c. Illumination decreases with the square of the distance from a point source.

**Impairment** - A loss or abnormality of physiological or anatomical structure or function.

**Indication statement** - States the name of an indicator that the user reads or observes and the indication expected to result from the action.

**Information automation** - Includes information acquisition and integration. This type of automation would include filtering, distributing or transforming data, providing confidence estimates and integrity checks, and enabling user requests

**Input focus** - The notion that only one window and usually only one object in a window at a time is capable of accepting input from a pointing device or the keyboard.

**Interlaced** - A display that produces a video image by displaying alternate scan lines.

**Interlocks** - Devices (for example, switches) connected with a cover, shield, or case that disable the associated internal hazard (usually electrical) when the cover, shield, or case is opened. OSHA regulations discuss lockout and tagout procedures to be used in the workplace during maintenance or operations to protect from electrical hazards.

**Interocular crosstalk** - When the left eye can see the images intended for the right eye, and vice versa.

**Irradiance** - The radiant flux density on a given surface.

**Isometric joystick** - Responds to the amount and direction of pressure applied to it, but it does not move. Displacement joysticks usually require less force than isometric joysticks and are thus less fatiguing over long operating periods.

**Item** - A nonspecific term used to denote any product, available or in design or development, including parts, components, modules, and units of equipment.

**Jitter** - A departure from geometric stability which occurs when pixels in displayed objects move instead of remaining in a fixed position.

**Keyboard accelerator** - A key or simultaneous combination of keys that a user can type to select an option in a menu without having to display the menu.

**Keyboard lockout** - A state determined by an application in which the application does not accept input from the keyboard.

**Keyguard** - A keyboard cover with holes over keys.

**Label** - Alphanumeric information that identifies or describes an object. Labels can be printed directly on or adjacent to the object, or they can be printed on a card or plate that is attached to the object or adjacent to the object.

**Lateral rotation** - Turning away from the midline of the body.

**Layout** - The physical arrangement of the parts and components that make up a module or a unit of equipment.

**LCD** - See liquid crystal display.

**Left-justified text** - Lines of text are aligned at the left, but spacing within and between words is not varied, resulting in a ragged right margin.

**Legibility** - The extent to which the user can decipher or read alphanumeric characters or text.

**Levers** - Controls having the same size and shape, but that allow continuous adjustment.

**Limit stops** - Mechanical mechanisms designed to restrict a moving object or part by stopping it at predetermined (limit) positions.

**Line** - Any single length of pipe, wire, or tubing.

**Linking sentence** - A sentence that connects the paragraph it is in to the paragraph that precedes or follows it. The connection is usually accomplished by repeating a word or phrase or referring to a concept.

**Liquid crystal display (LCD)** - Is a flat-panel display that works by suspending liquid crystals between two transparent sheets of polarizing material. An electric current passes through the liquid causing the crystals to act like a shutter, either permitting light to pass through or blocking the light so that it cannot pass through.

**List** - A series of similar or related items in which each item is marked and displayed on a separate line or lines. The markings can be graphic symbols, such as bullets (•) or squares (◻), or sequential identifiers, such as numbers or letters. An item can be a word, a phrase, a sentence, or a group of sentences.

**Lockout** - Uses a mechanical mean to disable a control or switch in its safe position (for example, electricity disconnected) and to prevent its activation without the use of undue force or tools.

**Luminance** - The amount of light per unit area emitted or reflected from a surface. Measured in candela per square meter ( $\text{cd}/\text{m}^2$ ), footlamberts (ft-L), or millilamberts (mL).  $1.0 \text{ cd}/\text{m}^2 = 0.31 \text{ mL} = 0.29 \text{ ft-L}$ . The luminance of a surface does not vary with the distance of the observer from the surface being viewed. Luminance is expressed in candela per meter squared or foot lamberts.

**Luminance contrast** - The contrast between a figure and its background.

**Luminance ratio** - The luminance of the foreground divided by the luminance of the background. It indicates how much brighter a pure white output would be than a pure black output. The greater the contrast, the sharper the image will be. It is also called contrast ratio.

**Marking** - Nonverbal information, such as colors or symbols, that identifies or describes an object. Marking can appear directly on or adjacent to the object, or it can be printed on a card or plate that is attached to the object or adjacent to the object.

**Mechanical binding** - The pages are punched with either round or slotted holes and then placed in a ring binder or bound with a comb or spiral binder.

**Medial rotation** - Turning toward the midline of the body.

**Mental model** - An individual's understanding of the processes underlying system operation.

**Menu** - A list of options from which a user makes a selection or selections.

**Menu bar** - A narrow panel, usually at the top of a computer screen in menu-based computer systems, that continually displays the highest-level menu options for selection by the user. The options on a menu bar are usually the names of other menus.

**Menu function** - Causes the appearance of a menu appropriate to the location of the pointer.

**Message window (message box)** - A secondary window that provides users with non-critical information, progress information about lengthy processes, alerts to unusual events, and/or warnings of potential dangers. Message windows may be modal or modeless.

**Minimize** - The operation that reduces a windows presence into a standby icon button on the information line at the bottom of the screen.

**Mnemonic** - A single letter that a user can type to select an option in a menu.

**Modal window** - A window with which a user must interact before being able to interact with any other windows. A user cannot interact with other windows as long as the modal window is displayed.

**Modeless window** - A window that allows a user to interact with other windows.

**Modifier keys** - Keys that modify or qualify the effects of other keys for as long as they are held down, for example, **Shift**, **Ctrl**, and **Alt**.

**Modular** - To be modular means to be designed with standardized or uniform components.

**Modularization** - The separation of equipment into physically and functionally distinct units that can be easily removed and replaced.

**Module** - An assemblage of two or more interconnected parts or components that comprise a single physical and functional entity. It is this singular functionality that defines a module.

**Motion artifacts** - The after images that appear to follow a moving display object because the images of the previously drawn object have not yet decayed enough to disappear. They often look like the tail of a comet following the object in motion.

**Mounting** - The positioning and attachment of parts, components, and modules.

**N** - Is a metric term for the force measure called a Newton. One pound force in the English measurement system is equal to 4.4482 Newton (1 lbf = 4.4482 N).

**Navigation keys** - Keys that move a cursor, for example, **Arrow** keys, **Home**, **End**, **Page Up**, and **Page Down**, which are dedicated to keyboard navigation

**Newton** - A one pound force in the English measurement system is equal to 4.4482 Newton (1 lbf = 4.4482 N).

**Non interlaced** - A display that produces a video image by displaying all lines in a frame in one pass from top to bottom before the next frame appears.

**Note** - A written notice given to draw the reader's attention to something or to supply additional information.

**On-line Help** - Primarily an interactive, context-sensitive source of information that can prompt a user what entry to make at the current location in an application, what keystrokes are required, or what steps are required to complete a task. Secondly, on-line Help is a form of on-line documentation and reference information.

**Option** - One of the selectable items in a menu.

**Option buttons** (exclusive buttons or radio buttons) - Single, two-state choices, which are mutually exclusive from each other.

**Outline selection** - An extended form of drag selection that is particularly useful for graphical objects when normal drag selection conflicts with moving objects with the mouse.

**Packaging** (of a unit of equipment) - The assembling, mounting, and enclosing of the items it includes.

**Paging** - The process of scrolling through data one page at a time.

**Palettes** (graphic menus) - A set of unlabeled symbols, typically presented within small rectangles. Symbols may be icons, patterns, characters, or drawings that represent an operation. Palettes are used widely in drawing and painting packages but are commonly found in word-processing applications as well.

**Pamphlet binding** - The pages are stitched or stapled together. There are two types of pamphlet binding, saddle stitched and side stitched.

**Panes** - The separate viewing areas in a split window.

**Panning** - An orientation of display framing in which a user conceives of the display frame as moving over a fixed array of data.

**Part** - An object that cannot normally be broken down further without destroying its designated use. Fuses, resistors, and capacitors are examples of parts.

**Passageways** - Areas across which people must pass for work purposes.

**Passive Help** - A form of Help that simply responds to user requests for information. The information may be in the form of on-line system documentation, such as a user's guide or a list of functions performed by combinations of key presses.

**Percentile statistic** - Determined by ranking all data values (using the applicable measurement values related to the selected human physical characteristic) in the sample and determining the percentage of data that fall at or below a specific datum value.

**Percentile value (or point) of the selected datum** - The percentage of data that fall at or below a specific datum value.

**Perfect binding** - The pages are assembled, the left side is cut and roughed, glue is applied, and the cover is attached to the pages.

**Phosphor** - A luminescent substance, used to coat the inside of a CRT, which emits visible light when illuminated by electrons within an evacuated glass tube.

**Pica** - The unit of measurement used in printing. It is equal to 0.17 inch (4.23 mm).

**Point** - A measure of the height of type; there are 72 points in an inch (2.54 cm).

**Pointer** - A symbol displayed on the screen that is controlled by a pointing device. Its shape may change depending on the function that is invoked at a particular moment or its location on the screen.

**Pointing device** - A non-keyboard device that allows a user to navigate rapidly around the screen and to specify and select objects for manipulation and action. Examples include a mouse, trackball, stylus and grid, and light pen.

**Polarity** - The relationship between the brightness of the background and an image. Bright images on a dark background is negative polarity and dark images on a bright background is positive polarity.

**Pop-up menus** - Menus that only appear on user demand. They are often associated with a particular object on a display (e.g., a pop-up menu listing acceptable command options close to the immediate work area). Because pop-up menus are not displayed all of the time, they do not take up valuable screen space. They provide an efficient way to access commands because they eliminate the need for the user to navigate to a menu bar or control bar. A pop-up menu typically contains 5 to 10 options presented in a vertical listing.

**Predefined fault isolation sequence** - A sequence of fixed procedures and tests that leads to a suspected fault. It is similar to a fault tree in a fault isolation manual.

**Preferred speech interference level (PSIL-4)** - A measure of the effectiveness of noise in masking speech.

**Primary colors** - Are Red, Green, and Blue (RGB) for light emitting displays such as CRTs. This is different than the primary colors for subtractive color mixture (like mixing paints), which are Yellow, Red and Blue.

**Primary window** - A top or high-level window in an application. It is the main location of user interaction and functions independent of other primary windows in the application.

**Print contrast** - The ratio of the difference in brightness between the printing and its background to the brightness of the background (assuming dark print on a light background). It is defined by  $(B1-B2)/B1$ , where B1 is the brighter of the two.

**Proceduralized instruction** - A set of step-by-step instructions for a procedure intended to ensure the successful completion of a task.

**Pronation** - The downward turning of the palm.

**Public entrances** - Any entrances that are not loading or service entrances.

**Pull-down menu** - A menu associated with an option on a menu bar that appears when a menu bar option is selected.

**Query** - The process of specifying, locating, and retrieving data matching specified characteristics from a database.

**"R," The multiple correlation coefficient** - Is a statistical number that indicates the strength of the relationship between sets of data. The correlation coefficient can be between  $-1$  and  $+1$  with a correlation of  $|1|$  indicating a perfect correlation. The closer the number is to  $|1|$ , the stronger the relationship between the two sets of data. It is recommended that only correlations with strong predictive values be used (that is where  $r$  or  $R$  is at least or greater than  $|.7|$ ).

**Radio buttons** (exclusive buttons or option buttons) - Single, two-state choices, which are mutually exclusive from each other.

**Reasonable accommodation** - Any modification or adjustment to a job or the work environment that will enable a qualified person with a disability to participate in the application process and to perform essential job functions.

**Reflectance** - The ratio of luminous flux reflected from a surface to luminous flux striking it.

**Refresh rate** - The rate (in cycles per second or Hz) at which the displayed contents of a computer screen are regenerated.

**Resolution** - The number of pixel elements per square inch on a monitor.

**Right hand page/Left hand page** - The terms right-hand page and left-hand page have meaning only if pages are printed on both sides. In that case, a right-hand page is the page printed on the front, and a left-hand page is the page printed on the back. Thus, when the pages are bound, and the document is open, the right-hand page appears on the right, and the left-hand page appears on the left.

**Right-justified text** - Lines of text are aligned at the right, but spacing within and between words is not varied, resulting in a ragged left margin.

**Saddle stitching** - A type of pamphlet binding that permits the document to lie flat.

**Saturation** - The relative amount of whiteness in a chromatic color.

**Save** - A command that causes the computer to save the data.

**Scrolling** - A method used to move through the contents of a window or list in a dialogue box using the scroll-bar or scroll arrows.

**Scrolling menu** - A menu, usually containing many options, that does not display all of the options at once. It includes a scroll-bar that permits the sequential display of all options. Scrolling menus are also called list boxes and scrolling lists.

**Seat reference point** - A point in the mid-sagittal plane where the seat back and seat pan intersect.

**Secondary colors** - Secondary colors are Cyan, Magenta, and Yellow (CMY) for light emitting displays such as CRTs.

**Secondary window** - A window that is displayed from within a primary window or another secondary window. Secondary windows are sometimes called child windows.

**Security architecture** - A subset of the overall system architecture that protects the automated system, telecommunication, physical, and informational assets through denial of service and unauthorized (accidental or intentional) disclosure, modification, or destruction.

**Security safeguards** - The protective measures and controls that are prescribed to meet the security requirements specified for a system. Those safeguards may include but are not necessarily limited to: operational procedures, physical security, or hardware and software features.

**Select function** - Selects or activates objects on the screen or sets the location of the cursor.

**Selection** - The action a user makes in choosing a menu option. Selection may be accomplished by pointing, by typing, or by pressing a function key.

**Serifs** - Decorative elements (short lines, knobs, and balls) at the ends of the strokes that form letters. Sans serif fonts do not have these decorative elements.

**Service points** - A means for lubricating, filling, draining, charging, and performing other service functions. They permit the routine performance of these services on all equipment and components requiring them.

**Shield** - An enclosure or barrier intended to protect components that are susceptible to damage or to protect maintainers from possible injury.

**Slider** - A control used to set a value and give a visual indication of the setting.

**Soft function key** - An area on the screen that represents a function key.

**Special purpose keys** - Keys that have a special function, such as **Help**, **Delete**, and **Backspace**.

**Specular glare** - The appearance of unwanted images (reflections) on the display surface.

**Specular surface** - One that provides a specular reflection, a shiny surface.

**Speech interference level (SIL or SIL-4)** - A measure of the effectiveness of noise in masking speech. It is the arithmetic mean of the same pressure levels of interfering noise in the four octave bands centered on the frequencies 500, 1000, 2000, and 4000 Hz, respectively. The unit of speech interference is the decibel (dB).

**Spin box** (also known as a **spin button**) - A variation of the scrolling menu or list. A spin box is made up of a text box and two arrows and displays a sequence of mutually exclusive choices.

**Spin button** (also known as a **spin box**) - A variation of the scrolling menu or list. A spin button is made up of a text box and two arrows and displays a sequence of mutually exclusive choices.

**Split bar** - The divider placed across the middle of the window that separates the panes.

**Split box** - A rectangular indicator located inside the scroll-bar of a split window or immediately above the scroll-bar of a split-able window. Note, however, that in some rules, the split box is called the split bar.

**Stacking** - The stringing together of commands so that they can all be executed with a single command.

**Standard combo boxes** - A special type of text box that includes a standard list of options with all options visible to the user.

**Standardization** - Standardization refers to common user-interface features across multiple applications.

**Stated indication** - What is expected if the equipment or system is operating normally.

**Static strength** - Also known as isometric strength, which is steady force exerted while the limbs are in a stationary or static position.

**Status bar** - A special type of message bar used to present information about the current status of the application.

**Stereopsis** (also called **stereoscopic vision**) - Three-dimensional depth perception based on retinal disparity. As the eyes are slightly separated, each eye sees a slightly different image, when these images are fused in the brain. The result is a perception of depth or stereoscopic vision.

**Stereoscopic display** - A method used to generate the sensation of three dimensions within the human visual system. Three-dimensional display technology may be "stereoscopic," which requires that users wear special glasses that provide different images to the two eyes, or "auto stereoscopic," which does not require any special viewing aids.

**Stereoscopic vision** - See Stereopsis.

**Stroke width** - The thickness of the lines used to make up the number or letter.

**Supination** - Is the upward turning of the palm, or lying face up.

**Syntax** - The set of rules governing the language of a command language. Examples would be rules about the order in which parts of a command occur or rules about punctuation in commands.

**Table** - An array of data or text in rows and columns. Usually at least one dimension, either the rows or the columns, is labeled; sometimes both are labeled.

**Tagouts** - Tags that are attached to a control or place of hazard to identify the required control condition and hazard associated with an ongoing mode of operation or maintenance.

**Tailoring** - The process of selecting and evaluating individual standards to determine the extent to which they apply to a specific system or piece of equipment. It includes the process of modifying these standards to ensure that there is an optimal balance between operational needs and cost.

**Tear-off menu** - A menu that can be removed from the menu bar and moved to another location on the screen where it can remain on display. Tear-off menus are also called “tacked” or “pushpin” menus.

**Technical Issuances** - According to FAA Order 1320.1D, are publications acquired from non-agency sources or developed within FAA that directly concern installation, maintenance, or modification of equipment, equipment systems, facilities, or aircraft. Manufacturers' instruction books for plants and equipment are included in this category. A basic objective of using this category is to permit the merging of internally-developed and externally-acquired technical manuals and publications into consolidated, single source documents. Because of necessary deviations from standard directive format and issuance procedures, they are designated technical issuances.

**Test points** - A means for conveniently and safely determining the operational status of equipment and for isolating malfunctions.

**Text boxes** - Edit controls into which the user types information. Most text boxes are one line tall, but applications can also use multi-line text boxes.

**Text frame** - A sizable field into which the user can type text. This is a dynamic form of an edit field and should not be confused with the text box. Although text frames are generally rectangular, other shapes may also be used.

**Thermal comfort** - Defined as a mental condition that is based upon the lack of perception of noticeable changes in temperature, and that results in a personal expression of satisfaction with the environment.

**Title** - A word or phrase that describes or identifies the contents of a document or a portion of a document.

**Toggle switch** - A switch with discrete positions operated by a lever.

**Toggled menu options** - Options that are used to issue commands as a binary selection of one of two opposite commands.

**Tonal coding** - Coding based on different shades of the same hue or different patterns or textures.

**Transilluminated display** - A display in which light passes through the element being viewed.

**Tremor** - The oscillation of a body extremity, which may occur along with an effort to maintain a fixed position or direction. The degree of tremor is measured by the distance or number of departures from the fixed path or position per unit of time. Tremor increases when (1) effort is made not to tremble, and (2) fatigue is present. It is greatest in vertical motion, less in front-to-back motion, and least in side-to-side motion.

**Type family** - A collection of fonts that are similar in design but vary in size and boldness.

**Unit of equipment** - An assemblage of items that may include modules, components, and parts that are packaged together into a single hardware package. For example, a computer, its keyboard, and its visual display are all units of equipment, as are radio transmitters and receivers.

**User-centered perspective** - A user-centered perspective involves focusing on the needs and requirements of the end user throughout the design, acquisition, or development process.

**Utility window** - A supplementary window that provides the users with additional tools or controls, such as a tool palette or a set of text attributes.

**Viewing angle** - The angle off the center line from which a display will be viewed.

**Ventilation** - The process of supplying air to or removing air from any space by natural or mechanical means. From the standpoint of comfort and health, ventilation issues involve both quantity and quality.

**Visual angle** - The angle subtended by objects measured in minutes of arc. It represents an apparent size of an object based on the relationship between an object's distance from the viewer and its size (perpendicular to the viewer's line of sight). For example, if an object that is size  $h$  is at a distance  $d$  from the retina, the visual angle subtended,  $x$ , is:  $x = \arctan (h/d)$ .

**Walkways** - Areas designated for walking.

**Warning** - A written notice given to a reader when a situation might result in personal injury or loss of life; a caution is a written notice given when a situation might result in damage to or destruction of equipment or systems; a note is a written notice given to draw the reader's attention to something or to supply additional information.

**Weighted sound level (dB(A))** - A sound pressure level (in decibels) measured using a sound level meter with an A-weighting network. The A-weighted response is maximum at 2500 Hz, drops rapidly as frequency decreases below 1000 Hz, and gradually decreases above 4000 Hz, thereby approximating the frequency dependent human response to moderate sound levels. ANSI S1.4 gives the definition of a-weighting filter characteristics.

**Working area (or client area)** - The main area of the window that users employ to do their operational or application tasks. It is the area where users make their inputs and receive their outputs.

**Workplaces** - An area, room, or establishment where work is done.

**Workstations** - A place designed for a specific task or activity from where work is conducted or operations are directed. Desks, offices, repair benches, tools, equipment, and computer terminals are examples of these special accommodations and equipment. Workstations are designed as areas for one or more workers to use in accomplishing purposeful tasks or jobs.